

No. 743,555.

PATENTED NOV. 10, 1903.

C. G. PERKINS.
SNAP SWITCH OPERATING MECHANISM.
APPLICATION FILED AUG. 1, 1903.

NO MODEL.

Fig. 1

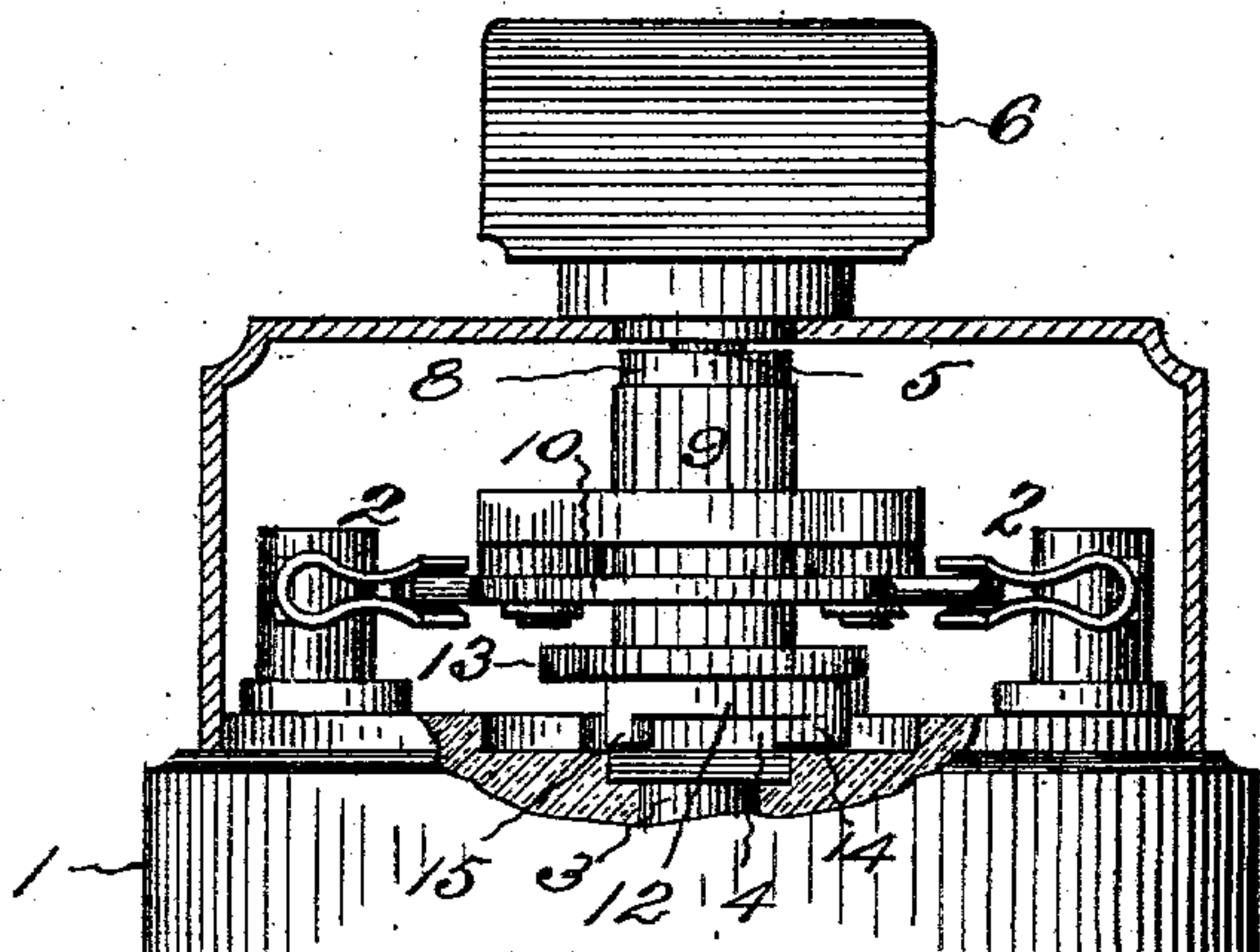


Fig. 2

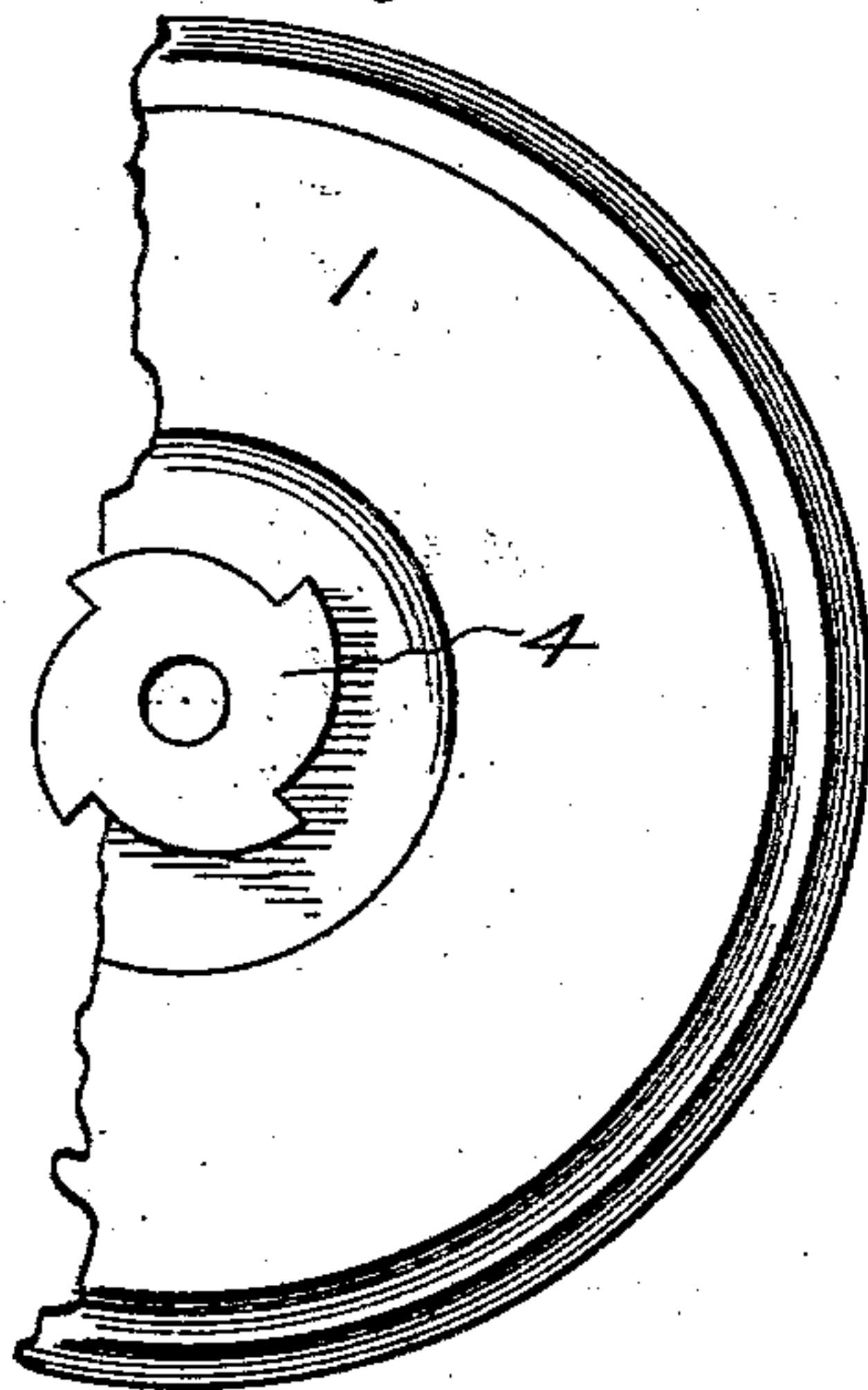


Fig. 3

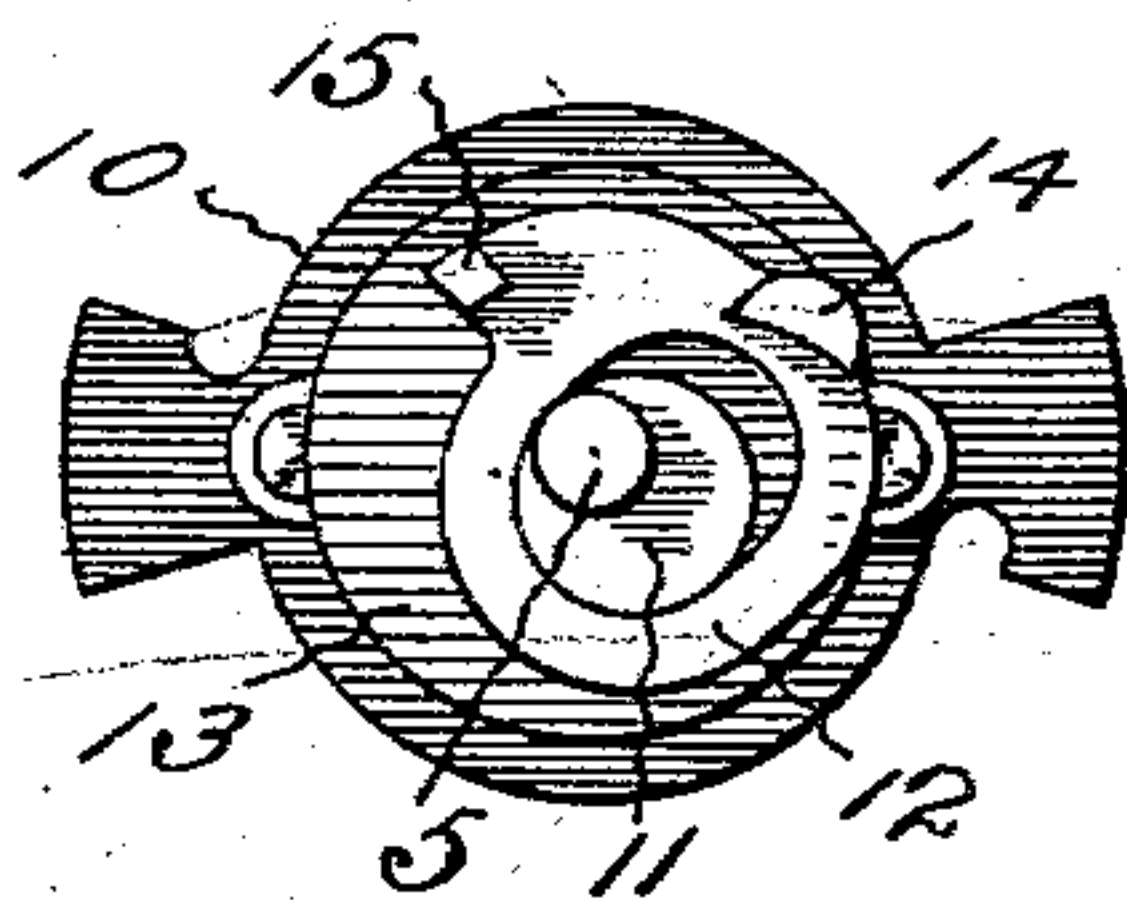


Fig. 4

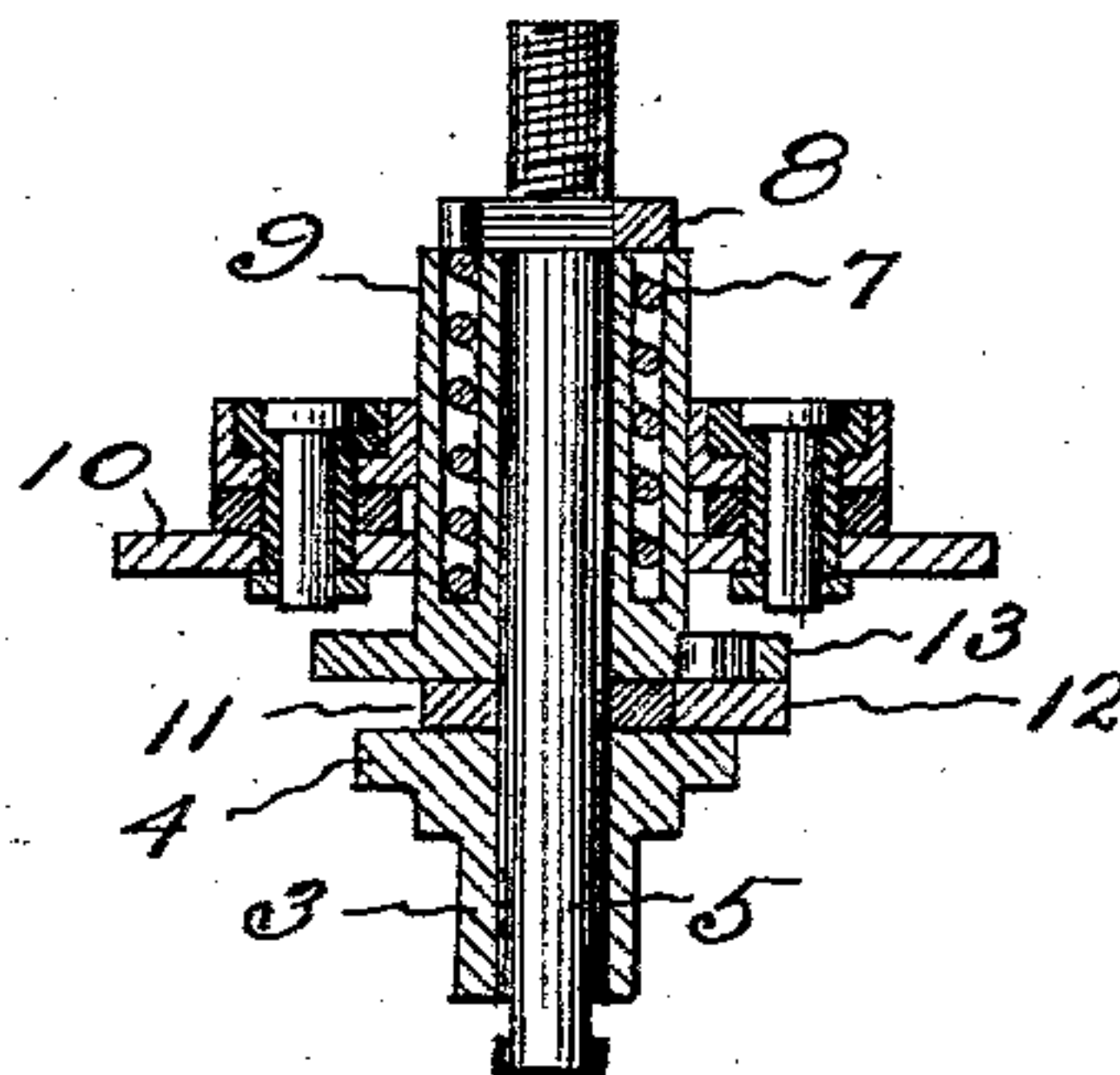
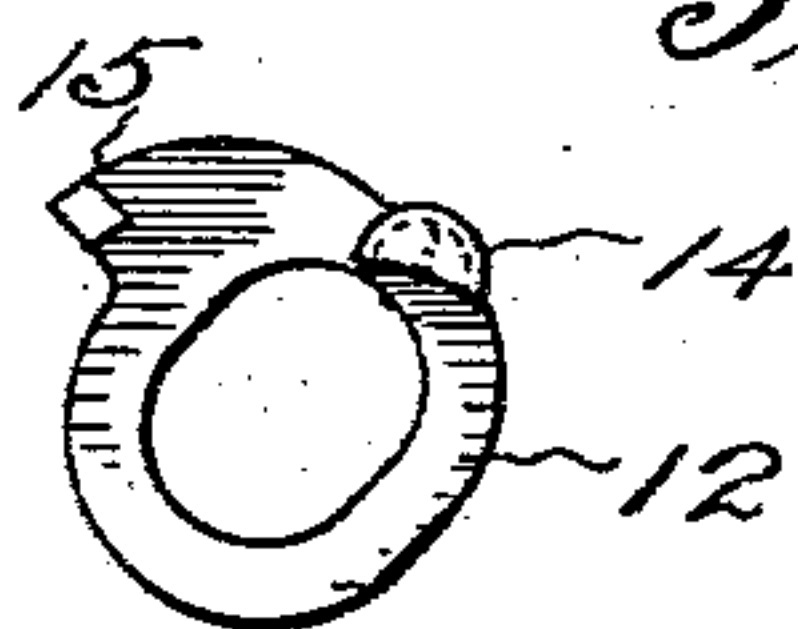


Fig. 5



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS, OF HARTFORD, CONNECTICUT.

SNAP-SWITCH-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 743,555, dated November 10, 1903.

Application filed August 1, 1903. Serial No. 167,903. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. PERKINS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Snap-Switch-Operating Mechanism, of which the following is a specification.

This invention relates to the construction of the mechanism of a rotary snap-switch which retains the movable poles until the throwing-spring has been given the necessary tension, when the handle is turned to throw the poles violently.

The object is to provide a compact construction which is simple and cheap to manufacture and durable and sure in use.

The handle-spindle of this switch has an eccentric which is encircled by a yoke that is pivoted to a plate which is connected with the poles that are loosely mounted upon the spindle. The yoke has two lugs which normally engage with the teeth of a ratchet that is fastened to the base and that are swung out from the ratchet-teeth by the eccentric when the handle is turned.

Figure 1 of the accompanying drawings shows a side elevation of a switch which embodies the invention with a portion of the base and cover broken away. Fig. 2 shows a plan of part of the base. Fig. 3 shows the under side of the eccentric, yoke, and movable poles. Fig. 4 shows a vertical section taken through the sleeve, pole-plate, eccentric, and yoke. Fig. 5 shows a plan of the yoke.

The insulating-base 1 of the switch may be any design and may be provided with a common form of terminal contacts 2. In an opening in the center of the base is a bushing 3 with a circular ratchet 4 fixed to its upper end. Supported by the bushing is a spindle 5, which has a handle 6. One end of the throwing-spring 7 is connected with a collar 8, fastened to the spindle, and the other end is connected with a sleeve 9, that is loose upon the spindle and to which the pole-plate 10 is fastened.

The eccentric 11 is fastened to the spindle below the sleeve. Embracing this eccentric is a yoke 12, that is pivoted on one side of the eccentric to a plate 13, that is fastened to the lower end of the pole-sleeve. On the

under face of this yoke on one side of the eccentric are a stop-lug 14 and a locking-lug 15. These lugs are arranged to engage with two teeth of the ratchet attached to the base.

When the spindle is rotated by turning the handle, the eccentric oscillates the yoke on its pivot and swings the stop-lug and locking-lug out of engagement with the teeth of the ratchet and allows the spring to throw the poles. The eccentric is so shaped that the yoke is not oscillated to relieve the stop-lug from a ratchet-tooth until the spring has been given the desired tension, and when the poles are thrown the eccentric draws the yoke so that the stop-lug and locking-lug engage teeth simultaneously and both receive the blow incident to the throwing of the poles.

The yoke is oscillated by the eccentric, and the locking-lug and stop-lug are swung radially away from the teeth of the ratchet with a movement that is even and smooth. As the locking-lug is farther from the pivot of the yoke it is moved a considerable distance from the ratchet-tooth it engaged before the stop-lug, which is close to the pivot of the yoke, is oscillated from the tooth it engages.

The tension of the spring tends to rotate the spindle and the eccentric and cause the yoke to draw the stop-lug and locking-lug into engagement with the ratchet-teeth in such way that the yoke in its normal position is locked against the ratchet and the eccentric held from movement other than such as would be given by the rotation of the handle.

The invention claimed is—

An electric switch having a base with stationary terminal contacts and external ratchet-teeth, a handle-spindle rotarily supported by the base, an eccentric fastened to and movable with the spindle, a sleeve mounted upon the spindle between the eccentric and the handle, a spring connecting the sleeve and the spindle, a pole-plate attached to and movable with the sleeve, a yoke pivotally fastened to and rotatably movable with the sleeve and embracing the eccentric, and a lug extending from the pivoted yoke and adapted to engage the ratchet on the base, substantially as specified.

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